



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of: ) Combustion Apparatus  
TETSUROU HAMADA ET AL )  
Ser. No.: 10/650,135 ) Examiner Carl S. Miller  
Filed: 8/28/03 ) Art Unit 3747

DECLARATION UNDER 37 CFR §1.132

I, Kimiaki Asano declare that:

1. I am an employee of Noritz Corporation of 93, Edomachi, Chuo-ku, Kobe-shi, Hyogo 650-0033 Japan, and engaged in research and development of combustion apparatus. I am familiar with valves for controlling fuel flow.
2. I am presenting my comment on Patent Application Publication No. 08-075141 (hereinafter called "JP 08-075141") laid open to the public by Japan Patent Office on March 19, 1996, more specifically on valve 20 referred to in the specification of, and shown in the figures of, JP 08-075141 . I declare that my comment is true and correct to the best of my knowledge and belief.
3. I have experienced disassembly and examination of valves each having configuration similar to that of the valve 20, as illustrated in Fig. 2 of JP 08-075141 . The valves I disassembled are for controlling flow of fuel oil by adjusting the opening area and were not intermittently operating valves. From those experiences, I believe that the valve 20 in JP 08-075141 is not an intermittently operating valve.

4. Hereinafter I explain the ground for the belief. The valve 20 illustrated in Fig. 2 of JP 08-075141 incorporates a ball-like member, which is not described in the specification. I have seen such ball-like members in the valves I disassembled. Each of the valves incorporating such ball-like members had a valve body consisting of a rod-like member and a ball-like member, as shown in Fig. 2 of JP 08-075141 . Please refer to Fig. 2, which is enlarged and attached hereto.

5. As to the valves I disassembled, the two members are discrete and unconnected. The ball-like member is pushed by the rod-like member, so as to adjust a gap between the ball-like member and a valve seat. I suppose the ball-like member functions for eliminating eccentricity of the valve body. The rod-like member is moved axially by means of a magnetic force generated by a coil surrounding the member. The rod-like member's tip may deviate from the center of the valve seat. If an opening area of the valve were defined by a gap between a rod-like member and a valve seat, the opening area would vary largely by the deviation of the tip from the center. Therefore, a configuration in which a ball-like member is pushed by a rod-like member to define the opening area is employed so that the opening area of the valve is maintained within an allowable range irrespective of eccentricity of the tip, I believe.

6. Explaining from another viewpoint, a valve body of an intermittently operating valve should be moved quite rapidly, as the valve should be opened and closed in a quite short period. However, such a valve as described above, which has a ball-like and a rod-like members, is slow in responding to inputted signals, as the valve body consists of two

discrete members. It seems impossible to use such a valve as an intermittently operating valve.

7. From both viewpoints, I believe that the valve 20 in JP 08-075141 is for controlling flow of fuel oil by adjusting an opening area and that the valve is not an intermittently operating valve.

The undersigned, being hereby warned that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. §1001, and that such willful false statements may jeopardize the validity of the application or any resulting registration, declares that the facts set forth in this application are true; all statements made of his own knowledge are true; and all statements made on information and belief are believed to be true.

Date: \_\_\_\_\_

Kimiaki Asano



PATENT & TRADEMARK OFFICE

I, Kimiaki ASANO, c/o Noritz Corporation of 93, Edomachi, Chuo-ku, Kobe-shi, Hyogo 650-0033 Japan,

am an employee of Noritz Corporation of 93, Edomachi, Chuo-ku, Kobe-shi, Hyogo 650-0033 Japan, and engaged in research and development of combustion apparatus. I am familiar with valves for controlling fuel flow.

I am presenting my comment on Patent Application Publication No. 08-075141 (hereinafter called "JP 08-075141") laid open to public by Japan Patent Office on March 19, 1996, more specifically on valve 20 referred to in the specification of, and shown in the figures of, JP 08-075141. I declare that my comment is true and correct to the best of my knowledge and belief.

I have experienced disassembly and examination of valves each having configuration similar to that of the valve 20, as illustrated in Fig. 2 of JP 08-075141. The valves I disassembled are for controlling flow of fuel oil by adjusting opening area and were not intermittently operating valves. From these experiences, I believe that the valve 20 in JP 08-075141 is not an intermittently operating valve.

Hereinafter I explain the ground for the belief. The valve 20 illustrated in Fig. 2 of JP 08-075141 incorporates a ball-like member, which is not described in the specification. I have seen such ball-like members in the valves I disassembled. Each of the valves incorporating such ball-like members had a valve body consisting of a rod-like member and a ball-like member, as shown in Fig. 2 of JP 08-075141. Please refer to Fig. 2, which is enlarged and attached hereto.

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Explaining from another viewpoint, a valve body of an intermittently operating valve should be moved quite rapidly, as the valve should be opened and closed in a quite short period. However, such a valve as described above, which has a ball-like and a rod-like members, is slow in responding to inputted signals, as the valve body consists of two discrete members. It seems impossible to use such a valve as an intermittently operating valve.

From both viewpoints, I believe that the valve 20 in JP 08-075141 is for controlling flow of fuel oil by adjusting an opening area and that the valve is not an intermittently operating valve.

Kimiaki Asano

Date: this 27 day of February, 2008